

ABSTRACT

A charging system to charge a battery of a robot includes a charger and a first charging part provided in the charger and including a high-frequency current generator to rectify commercial power and to convert the rectified power into a high-frequency square wave signal, a primary induction coil to generate an electromagnetic field by the high-frequency square wave signal supplied from the high-frequency current generator, and a first terminal part to emit the electromagnetic field created by the primary induction coil. The charging system also includes a second charging part provided in a robot and including a second terminal part to mate with the first terminal part, a secondary induction coil to generate an induced current by the electromagnetic field emitted from the first charging part, and a DC converter to rectify the induced current generated from the secondary induction coil and to supply DC power to the battery. Accordingly, the present invention provides the charging system for the robot, which charges the battery of the robot without electrical contact between the robot and a charger.